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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,951	11/19/2003	Dave Van Vliet	60538/2:1	9021

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INTEGRAL INTELLECTUAL PROPERTY INC.  
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CANADA

EXAMINER
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PRINCE, FRED G

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/717,951

Applicant(s)

VAN VLIET ET AL.

Examiner

Fred Prince

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,24-31 and 45-59 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 1-4,24-31 and 45-48 is/are allowed.  
6) ☒ Claim(s) 49-59 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 51 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 51 recites the limitation "the water component" in line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102/103***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been

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obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 49-50, 52, 53, 57-59 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chambers (US 2002/0179453).

Chambers teaches a system including an oxyhydrogen gas generator having two or more closely-spaced electrodes (105a, 105b) within a system to produce oxyhydrogen-rich gas (Fig. 1) which form bubbles, a power supply (108a, 108b, paragraph 0037) providing pulsed signals (paragraph 0037), contacting at least a portion of the stream containing a water component with at least a portion of the oxyhydrogen-rich gas (within container 11), wherein a water source is inherently external to the stream since tap water may be used, means for conveying at least a portion of the oxyhydrogen-rich gas to a device (120, paragraph 0034) within the system.

Regarding the recitations that the system is for treating a waste stream and the electrodes are immersed in the waste stream, it is submitted that the recitations are ones of intended use that fail to add structure to the apparatus as claimed. If it is applicant's position that the limitations somehow add structure to the claim, it is submitted that the apparatus of Chambers is capable of "treating a waste stream" and the electrodes are capable of being "immersed in the waste stream."

Regarding the recitation that the gas disinfects the stream, it is submitted that the recitation is one of intended use failing to add structure to the apparatus.

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If it is applicant's position that the limitation somehow adds structure to the claim, it is submitted that the apparatus of Chambers is capable of disinfecting the stream since oxygen is produced within the stream. It is widely known that oxygen is capable of, for example, oxidizing contaminants into harmless by-products and prevention<sup>ing</sup> the propagation of some undesirable microbes.

Per claim 59, it is submitted the recitation that the bubbles adhere to solids and rise to surface where they be removed is a process limitation that fails to add structure to the apparatus. If it is applicant's position that the limitation somehow adds structure to the apparatus, it is submitted that the apparatus of Chambers is capable of producing rising bubbles to which solids adhere for removal.

3. Claims 51 and 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chambers.

Per claim 51, Chambers is described above. Chambers does not disclose segregating a portion of the water component from the stream and producing gas from the segregated water component.

In any case, it is submitted that it is well known in the art to segregate a portion of a water component from a stream prior to producing a gas from the water component in order to, for example, reduce solids fouling of electrodes (see, for example, US Pat No 3,562,137 to Gehring).

Accordingly, it would have been readily obvious for the skilled artisan to modify the system of Chambers such that includes means for segregating a portion of a water component from a stream prior to producing a gas from the

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water component in order to, for example, reduce solids fouling of electrodes, as known in the art.

Per claims 54-55, Chambers is described above. Chambers does not disclose means for recovering heat and means for condensing water vapor.

It is submitted that it is well within the purview of the skilled artisan to provide means for recovering heat and means for condensing water vapor in order to, for example, conserve energy and resources and minimize the amounts of external energy required for the system (see, for example, US Pat No 3,829,368 to Wesley).

It would have been readily obvious for the skilled artisan to modify the system of Chambers such that it includes means for recovering heat and means for condensing water vapor in order to, for example, conserve energy and resources and minimize the amounts of external energy required for the system, as known in the art.

Per claims 56, it is submitted that it is conventional in the art to separate the gas into oxygen-rich and hydrogen-rich gases in order to, for example, utilize each gas for specific purposes. Accordingly, it would have been readily obvious for the skilled artisan to modify the system of Chambers such that it includes means to separate the gas into oxygen-rich and hydrogen-rich gases in order to, for example, utilize each gas for specific purposes.

***Allowable Subject Matter***

4. Claims 1-4, 24-31 and 45-48 are allowed.

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5. The following is a statement of reasons for the indication of allowable subject matter:

While it known in the art to provide a method of operating an oxyhydrogen gas generator within a system to produce oxyhydrogen-rich gas by submersing two or more closely spaced electrodes in the a stream and supplying a pulsed electrical signal to at least one of the electrodes to produce the oxyhydrogen-rich gas, contacting at least a portion of the stream with at least a portion of the oxyhydrogen-rich gas, and conveying at least a portion of the oxyhydrogen-rich gas for a second use in the system (see, for example, US 2002/0179453 to Chambers), in the examiner's opinion, the prior art fails to teach or fairly suggest the method further including treating a waste stream such that the oxyhydrogen-rich gas disinfects the waste stream.

### ***Conclusion***


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References are cited of interest to show the state of art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Prince whose telephone number is (571) 272-1165. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fred Prince  
Primary Examiner  
Art Unit 1724

fgp  
2/17/06